

## **ABSTRACT**

A disposable wound-healing device is disclosed that incorporates a housing having a fluid-impermeable material having a cavity and a perimeter that can be sealed in an air-tight manner over a wound region of a patient. The device is capable of producing a negative pressure 5 over the wound region by either removing oxygen from within the cavity, or absorbing fluid into the cavity and then removing the fluid from the cavity. The oxygen may be removed via chemical absorption, by an electrochemical cell or by a chemical reaction that cannibalizes oxygen from the cavity. The fluid may be removed through the use of osmotic or electro- 10 osmotic cells, or through a one-way valve. The negative partial pressure over the wound region promotes healing.